

FY 05 SUBOBJECTIVE IMPLEMENTATION PLAN

DRINKING WATER PROGRAM

INTRODUCTION

For almost 30 years, protecting the nation's public health through safe drinking water has been the shared responsibility of EPA, the states, and over 53,000 community water systems (CWSs)¹ nationwide that supply drinking water to more than 260 million Americans (approximately 90% of the U.S. population). Within this time span, significant accomplishments have been achieved. Health and safety standards have been established and are being implemented for 91 microbial, chemical, and radiological contaminants. Forty-nine states have primacy (primary enforcement authority) for their drinking water programs, and managers and operators of CWSs are better informed and trained on the variety of ways to both treat and prevent contaminants from entering the source of their drinking water supplies. During 2005 - 2008, EPA, the states, and CWSs will not only continue to maintain and build on their success in ensuring safe drinking water but also will work toward achieving a very ambitious goal, which is:

By 2008, 95% of the population served by community water systems will receive drinking water that meets all applicable health-based drinking water standards through effective treatment and source water protection.

This goal reflects the fundamental public health protection mission of the national drinking water program. Health protection-based regulatory standards for drinking water quality are the cornerstone of the program. Water systems meet the national standards using "neighborhood solutions." The standards do not prescribe a specific treatment approach. Rather, individual systems decide how best to comply with any given standard based upon their own unique circumstances. Systems meet standards by employing various elements of what public health experts refer to as "multiple barriers of protection". The multiple barriers may include source water protection; various stages of treatment; proper operation and maintenance of the distribution and finished water storage system; and customer awareness.

The principal purpose of this implementation plan is to identify and describe the major activities of EPA, states, and CWS that will take place in federal fiscal year 2005 (FY 05) (October 1, 2004 - September 30, 2005) relative to this goal.

¹Although the Safe Drinking Water Act applies to 161,201 public water systems nationwide (as of December 2003), which include schools, hospitals, factories, campgrounds, motels, gas stations, etc. that have their own water system, this implementation plan focuses only on CWSs. A CWS is a public water system that provides water to the same population year-round. As of December 2003, there were 53,363 CWSs.

OVERALL APPROACH

EPA has identified key activities within five core program areas that are critical to ensuring safe drinking water. The core program areas are:

- Development or revisions to drinking water standards;
- Implementation of drinking water standards and other program requirements;
- Promotion of sustainable management of drinking water infrastructure;
- Protection of sources of drinking water from contamination; and
- Assurance that critical water infrastructure is secure from terrorist and other intentional acts.

Collectively, these core areas and other interrelated elements of the national safe drinking water program form a balanced, integrated framework that comprise the multiple barrier approach to protecting public health from unsafe drinking water.

Under this approach, by the end of FY 05, the Agency and its partners will have ensured that 94% of the population served by CWSs receives drinking water that meets all health based standards with compliance dates of December 2001 or earlier. Also as a result of these efforts, EPA expects that 75% of the population served by CWSs will receive drinking water that meets the next generation of chemical and microbial drinking water standards with compliance dates of January 2002 or later. These are two of the FY 05 strategic targets (ST) related to the national drinking water program. Other STs and program activity measures (PAMs) have been developed for some activities included within three of these core areas. One core area - - development or revisions to drinking water standards - - has neither STs nor PAMs. STs for assurance of the security of critical water infrastructure are being developed in FY 04. Nonetheless, primary activities within all core areas are critical components of a comprehensive description of the drinking water program's efforts in FY 05. To understand the role of EPA, the states, and CWSs, major activities in each core area are identified by the key player(s) in order to facilitate communications and negotiations between EPA Regional staff and the states as well as the states and tribes with CWSs.

The remainder of this plan outlines the FY 05 STs and PAMs (where applicable), FY05 Major Activities, Major Roles and Responsibilities for FY 05 Activities, and Related Guidance/Other Materials to be Issued in FY 05 for each of the five core areas as well as other related topics suggested in the October 2003 Guidance on FY 05 National Implementation Plans by Subobjective issued by the Office of Water.

CORE AREA 1: DEVELOPMENT/REVISION DRINKING WATER STANDARDS

FY 05 Strategic Target

None

FY 05 Major Activities

1. Promulgation of Rules

Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)

LT2ESWTR supplements existing regulations by targeting additional *Cryptosporidium* treatment requirements to higher risk systems. It contains provisions to mitigate risks from uncovered finished water storage facilities and to ensure that systems maintain microbial protection as they take steps to reduce the formation of disinfection byproducts. LT2ESWTR will apply to all systems that use surface water or ground water under the direct influence of surface water.

Stage 2 Disinfectant and Disinfection ByProducts Rule (Stage 2D/DBPR)

Stage 2D/DBPR focuses on public health protection by limiting exposure to DBPs, specifically total trihalomethanes (TTHM) and five haloacetic acids (HAA5), which can form in water through disinfectants used to control microbial pathogens. This rule will apply to all CWSs that add a primary or residual disinfectant other than ultraviolet (UV) light or deliver water that has been disinfected by a primary or residual disinfectant other than UV.

Ground Water Rule (GWR)

GWR specifies the appropriate use of disinfection in ground water and establishes multiple barriers to protect against bacteria and viruses in drinking water from ground water sources. The GWR is applicable to 43,000 CWSs nationwide and will establish a targeted strategy to identify ground water systems at high risk for fecal contamination.

Total Coliform Rule (TCR) Revisions

The TCR, which was promulgated in 1989, protects public health by specifying sampling requirements and maximum contaminant levels for bacteria in the distribution systems of public water supplies. EPA is evaluating revisions to the TCR to reduce the implementation burden and to address problems with drinking water distribution systems that may lead to contamination of drinking water.

2. Continuation of Standard Setting Processes

Scientific data and risk information on contaminants is assessed to determine if these contaminants need to be regulated through the Contaminant Candidate List (CCL) process; or if an existing standard should be revised based on the Six-Year Review of National Primary Drinking Water Regulations (i.e., 6-Yr Review) process. The 6-Yr Review process identified the proposed revisions to TCR, which is described above.

3. Analyses of Best Available Science and Information

Identification of new or revised standards for high-risk contaminants is based on up-to-date scientific research, risk assessment information, occurrence data, and cost/benefit estimations. EPA will continue to improve methods it uses to evaluate the health effects, benefits and costs of drinking water standards, and will continue to identify and prioritize the research needed to further protect public health. Some specific activities to accomplish this are: a) prioritizing and tracking research on contaminants; b) ensuring that monitoring data on such contaminants are reliable; c) improving and developing analytical methods to determine the occurrence of these contaminants in source water and evaluate their health effects; and d) enhancing the tools to estimate the cost and benefits of drinking water regulations.

4. Expansion of Initiative on Effective Alternatives to Regulations

Optimize treatment techniques and treatment technologies. Through EPA's voluntary Area-Wide Optimization Program (AWOP), drinking water systems conduct comprehensive performance evaluations (CPEs) to assess the performance of their filtration technology. By optimizing their use of filtration technology, systems can go beyond compliance to significantly reduce the human health risks associated with turbidity in finished drinking water. EPA currently provides optimization support for many small public water systems nationwide that use surface water sources.

Major Roles and Responsibilities for FY 05 Activities: Development/Revision of Drinking Water Standards

Activity	EPA		States	CWSs	Others
	Headquarters	Regions			
Rule Promulgation: LT2, Stage 2, GWR Revisions to TCR	Lead for all aspects of standard setting/rule development	Participate on workgroups	Participate on workgroups	Participate on workgroups	Stakeholder organizations (ASDWA, AWWA, NRWA) participate on workgroups
Standard Setting Processes: CCL, 6-Yr Review	Lead for all processes	Participate on workgroups	Participate on workgroups	Participate on workgroups	Stakeholder organizations (ASDWA, AWWA, NRWA, NDWAC) participate on workgroups
Analyses of Science/Data	DW Program and Office of R&D	Participate on workgroups	Participate on workgroups	Participate on workgroups	AWWARF, NAS/NRC
Effective Alternatives to Regulation: Treatment Techniques/Technologies	HQ's Technical Support Center (TSC) develops plans and policies. Final development of small surface water systems optimization tools and guidance to states and water systems	Serve on planning and policy development workgroups. Works closely with TSC to assist in identifying expansion opportunities. Works with states to identify systems that would benefit from this approach	Serve on workgroups. Thirteen states have been piloting AWOP since 1997 (participation by more states is encouraged)	Serve on workgroups. Hundreds of drinking water systems have been involved in AWOP since 1997	ASDWA

Related Guidance/Other Materials to be Issued in FY 05

LT2ESWTR Guidance

Ultraviolet Disinfection
Microbial Toolbox
Membrane Filtration
Source Water Monitoring
Microbial Laboratory
Small Entity Compliance

Stage 2 Guidance

Simultaneous Compliance
Consecutive Systems
Small System Compliance
Initial Distribution System Evaluation
Significant Excursions

GWR Guidance

Sanitary Survey
Hydrogeologic Sensitivity Assessment
Source Water Monitoring
Correction Action
Small System
Consecutive System

Other Guidance

Point of Use/Point of Entry (POU/POE) Guidance

CORE AREA 2: IMPLEMENTATION OF DRINKING WATER STANDARDS AND OTHER PROGRAM REQUIREMENTS

FY 05 Strategic Targets

- A. Percentage of the population served by CWSs that receive drinking water that meets health-based standards with which systems need to comply as of December 2001.

Definition: See attached chart of pertinent contaminants.

How to report: Regions submit annual commitments to be negotiated with Headquarters. End-of-Year data gathered by Headquarters through Safe Drinking Water Information System (SDWIS).

- B. Percentage of the population served by CWSs that receive drinking water that meets health-based standards with a compliance date of January 2002 or later.

Definition: Same as A.

How to report: Same as above.

- C. Percentage of CWSs that provide drinking water that meets health-based standards with which systems need to comply as of December 2001.

Definition: Same as A.

How to report: Same as above.

- D. Percentage of CWSs that provide drinking water that meets health-based standards with a compliance date of January 2002 or later.

Definition: Same as B.

How to report: Same as above.

- E. Percentage of the population served by CWSs on Indian land that receive drinking water that meets all applicable health-based drinking water standards.

Definition: Applies to CWSs owned and operated by tribes; excludes CWSs in Indian country that have non-tribal ownership.

How to report: Same as above.

Contaminants Regulated Under the Safe Drinking Water Act								
Final Regulations	1976	1979	1986	1987	1989		1991	
	NPDWRs 12/75; 7/76	TTHMs 11/79	Fluoride 4/86	Phase I (VOCs) 7/87	TCR 6/89	SWTR 6/89	Phase II 1/91; 7/91	LCR 6/91
Cumulative # of Reg. Contaminants	22	23	23	31	31	35	61	62
Contaminants Regulated	2,4-D 2,4,5-TP (Silvex) arsenic barium cadmium chromium coliform bacteria endrin fluoride gross alpha gross beta lead lindane mercury methoxychlor nitrate radium-226 ¹ radium-228 ¹ selenium silver toxaphene turbidity	Total THMs	Fluoride (revised)	benzene carbon tetrachloride 1,2-dichloroethane p-dichlorobenzene 1,1-dichloroethylene 1,1,1-trichloroethane trichloroethylene vinyl chloride ¹	Total coliforms ² (revised)	Giardia ⁴ Turbidity ⁴ (revised) HPC bacteria ⁴ Legionella ⁴ Viruses ⁴	2,4-D (revised) 2,4,5-TP (revised) acrylamide ⁴ alachlor aldicarb ⁵ aldicarb sulfone ⁵ aldicarb sulfoxide ⁵ asbestos atrazine barium (revised) cadmium (revised) carbofuran chlordane (mono) chlorobenzene chromium (revised) dibromochloropropane o-dichlorobenzene cis-1,2-dichloroethylene trans-1,2-dichloroethylene 1,2-dichloropropane epichlorohydrin ⁴ ethylbenzene ethylene dibromide heptachlor heptachlor epoxide lindane (revised) mercury (inorg) (revised) methoxychlor (revised) nitrate nitrite total nitrate/nitrite PCBs pentachlorophenol selenium (revised) silver styrene tetrachlorethylene toluene toxaphene (revised)	copper ⁴ lead ⁴ (revised)

						xylene	
Contaminants Regulated Under the Safe Drinking Water Act							
Final Regulations	1992	1995	1998		2000	2002	
	Phase V		Stage I DBPR	Interim	Radionuclides	LT1, ESWTR	
	7/92		12/98	ESWTR 12/98	12/00	1/02	
Cumulative # of Reg. Contaminants	84	83	89	90	91	91	
Contaminants Regulated	adipate, di(2-ethylhexyl) antimony beryllium cyanide dalapon dichloromethane ⁶ dinoseb dioxin (2,3,7,8-TCDD) diquat endothall <i>endrin (revised)</i> glyphosate hexachlorobenzene hexachlorocyclopentadiene nickel oxamyl (vydate) PAHs (benzo(a) pyrene) phthalate, di(2-ethylhexyl) picloram simazine thallium 1,2,4-trichlorobenzene 1,1,2-trichloroethane	<i>Nickel (remanded)</i>	bromate chloramine chlorine chlorine dioxide chlorite haloacetic acids (HAA5) ² <i>THMs (revised)</i>	Cryptosporidium <i>Giardia (revised)</i> <i>Turbidity (revised)</i>	<i>gross alpha (revised)</i> <i>gross beta (revised)</i> <i>radium-226 (revised)</i> <i>radium-228 (revised)</i> uranium	No new contaminants added and no existing standards revised	

Notes:

Strategic Targets A & C definition captured in white columns.

Strategic Targets B & D definition captured in gray columns.

- Radium-226 and radium-228 are counted as two contaminants although their standard is combined.
- Total THMs, haloacetic acids, and total coliforms are counted as one contaminant although both are combined standards: THMs (chloroform, bromodichloromethane, dibromochloromethane, bromoform); TC (total coliform bacteria including fecal coliforms and E.coli); HAA5 (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, bromoacetic acid, and dibromoacetic acid).
- Vinyl chloride is also known as chloroethylene & monochloroethylene.
- These nine contaminants have a treatment technique instead of a MCL.
- Aldicarb, aldicarb sulfone, and aldicarb sulfoxide are considered regulated contaminants although their MCLs are stayed.
- Dichloromethane is also known as methylene chloride.

FY 05 Major Activities

1. Compliance with Existing Regulations

CWSs continued compliance with health-based standards

States will ensure that **all** CWSs and especially large systems, will be in compliance with all existing health-based standards in FY 05. A large system in New York, NYC Croton, is an exception to this requirement. According to Region 2's plan, this system will install filtration in 2010 at the earliest. In addition, Puerto Rico's Metropolitan system has a history of persistent violations. EPA's initiative, described under Core Area 3, will assist PR's Department of Health in infrastructure improvements, which will have the subsequent effect of reducing their violations.

Grant Guidance - Public Water Systems Supervision (PWSS) Program

The FY 05 President's Budget requests \$105.1 million for this grant program, an increase of \$2.6 million from the FY 04 appropriations and over \$12.5 million from the FY 03 funding level. EPA will issue new program guidance on high priority activities for States' use of these funds.

2. Implementation of New and Existing Regulations

Technical Assistance

Many reference materials (e.g., "rollout strategy," implementation guidance, quick reference guides) for LT2ESWTR, Stage2D/DBR, and GWR will be developed, issued and disseminated.

Training

Training sessions (e.g., in person, satellite/webcast) on implementation of LT2ESWTR, Stage2D/DBR, and GWR will be developed and delivered. In addition, the Drinking Water Academy develops and delivers training (in both English and Spanish) on a variety of drinking water areas, e.g., SDWA, the PWSS program, capacity development.

Development/Review/Adoption of State Primacy Packages for New Rules

States attain primacy (primary enforcement authority) when they have rules in place for contaminants regulated by the National Primary Drinking Water Regulations that are no less stringent than the regulations promulgated by EPA. EPA reviews and approves these rules. States have up to 2 years to develop regulations and submit primacy packages after new regulations are promulgated by EPA. States can request an additional 2 year extension.

Direct Implementation

Until the states adopt rules (as described above), EPA (Regions) implement these rules. In addition, EPA (Regions) implement drinking water programs for Indian tribes except for the Navajo Nation, which received primacy in 2001.

Operator Certification

States must implement programs to certify operators of drinking water systems. (In 2000, EPA published guidance outlining minimum requirements for States' operator certification programs.)

Sanitary Surveys

Sanitary surveys are on-site reviews of the water sources, facilities, equipment, operation, and maintenance of public water systems for the purpose of evaluating the adequacy of the facilities for producing and distributing safe drinking water. The Drinking Water Academy is planning to provide over 25 training sessions to sanitary survey inspectors in FY 05.

Program Activity Measures for Sanitary Surveys

Each year, all States will be in compliance with requirements to conduct sanitary surveys at CWSs once every three years, as documented by file audits of a random selection of water systems.

(Effective 12/04)

Each year, all Tribal water community systems will have undergone a sanitary survey within the past 3 years.

(Effective 12/04)

Small Systems Initiative

Over 45,000 of the total 53,363 CWSs nationwide are considered small, each of which provide drinking water to fewer than 3,300 people. Many of these small systems lack sufficient managerial, technical, and financial capacity to meet both new and existing health-based standards for drinking water, and, thereby, the health of their customers are placed at risk. EPA, the states, and selected stakeholders (e.g., the National Rural Water Association, the Rural Community Assistance Program) provide training on a wide variety of activities that small systems can implement to comply with standards for drinking water contaminants. Through AWOP, EPA and the states are assisting small systems in using cost-effective treatment technologies. In FY 05, small surface water systems optimization tools and guidance to states and water systems will be available. In addition, the FY 05 plans of Regions 1 and 6 have highlighted the initiatives they are implementing, which include Region 1 providing compliance assistance to meet new regulatory requirements for small systems and Region 6 working with Oklahoma to provide performance-based training.

3. Data Access, Quality, and Reliability

Safe Drinking Water Information System (SDWIS)

- a) Modernization of this system, which serves as the primary source of national information on compliance with all health-based, regulatory requirements of SDWA, will be completed.
- b) New drinking water program requirements will be incorporated into SDWIS to help states (and those Tribes having access to SDWIS) monitor and report drinking water data. In FY 05, at least 21 training courses are planned for the use of SDWIS/STATE and 15 computer-based, task-specific training modules are expected to be developed.
- c) Data verifications (DVs) and other activities (e.g., QA/QC) to help states improve data completeness, accuracy, timeliness, and consistency will be conducted. These DVs also provide EPA with critical information on how rules are being implemented. In FY 05, 13 DVs will be conducted.

Major Roles and Responsibilities for FY 05 Activities: Implementation of Drinking Water Standards and Other Requirements

Activity	EPA		States	CWSs	Other
	Headquarters	Regions			
Continued CWS Compliance with health-based standards	Develop and issue guidance, reference materials	Work with states to ensure CWS compliance with existing health-based standards Work with states to ensure laboratory certification and QA/QC	Ensure CWS are in compliance with existing health-based standards Continue to implement the Laboratory Certification program and QA/QC program	Meet health-based standards Use quality laboratories	ASDWA
PWSS Grant Guidance PWSS Grants Management	DW program to issue guidance. Issue new grant guidance on high priority areas for states use of grant funds	Participation in workgroup. Ensure states receive and understand grant guidance Work with states in implementing effective grants management	Participation in workgroup	n/a	ASDWA
Technical Assistance on New Health-based Standards	DW program develops, issues and disseminates reference materials for new rules	Ensure states receive reference materials	Ensure dissemination of applicable information to water systems	Review reference guides and implementation guidance	ASDWA, AWWA, NRWA
Training on New Health-based Standards	DW program develop and deliver training modules for states and water systems	Facilitate training needed by the states on the new rules	Provide training on the new rules to water systems	Obtain training for staff on new rules	AWWA, NRWA, RCAP
State Primacy Packages	DW program to review/streamline the primacy process	Provide timely review and approval of primacy packages	Develop primacy packages	n/a	ASDWA

Activity	EPA		States	CWSs	Other
	Headquarters	Regions			
Direct Implementation	DW program provides <u>limited</u> support for Regional implementation	For Wyoming, Region 8 has responsibility for managing and administering the drinking water program For Tribal CWSs, Regions will ensure direct program activities are being implemented.	Work with Regions to identify direct implementation activities	n/a	ASDWA, Indian Health Service, Bureau of Indian Affairs
Operator Certification	DW program coordinates operator certification programs with states and ABC	Provide oversight of state operator certification programs	Continue to implement operator certification programs Review tests and training to ensure inclusion of material on new rules and security	Ensure operators are properly trained and licensed	ASDWA, ABC
Sanitary Surveys	DW program track conduct of sanitary surveys Conduct sanitary survey training sessions	Provide oversight of state sanitary survey programs and track completion to ensure goals are met	Ensure that CWSs receive a sanitary survey every three years	Correct deficiencies identified in sanitary surveys.	ASDWA works with EPA on revising guidance documents
Small Systems Initiative	DW program provides various implementation support activities (e.g., rule training, development of fact sheets, STEP Guides, other outreach materials)	Provide various implementation support activities.	Provide various implementation support activities.	Participate in training	ASDWA, NRW, RCAP provide training
SDWIS Modernization	Complete modernization of SDWIS	Participate in workgroups	Participate in workgroups	n/a	Modernization Workgroups, ASDWA, ECOS

Activity	EPA		States	CWSs	Other
	Headquarters	Regions			
SDWIS Implementation	Incorporate new drinking water program requirements OEI sets standards for how data is reported	Participate in Joint Req'ts Planning Process (JRP) workshops for new rules	Participate in JRP workshops for new rules Implement new SDWIS modules	Report compliance-based measures to states	JRP and other Workgroups, ASDWA, ECOS
Data Verifications (DVs) and other QA/QC activities	Conduct DVs of states	Work with states to improve timeliness and accuracy of reporting Identify states where DVs should be conducted & assist in the conduct of DVs	Make files available for DVs/address questions Continue to strive for timely and accurate reporting to EPA Make changes suggested in DVs	n/a	n/a

Related Guidance/Other Materials to be Issued in FY 05

Guidance on Interstate Carrier Conveyance (ICC) Program Implementation for Aircraft Rule-Specific Case Studies and Measures that Result in Improved Compliance

Case Studies based on Arsenic Treatment Demonstration Pilot Projects

General Guidance for Development of Short-Term Health Effect Thresholds for Use in Public Education/Risk Communication, Weighted Averaging, and Variances and Exemptions

Final Report on the Evaluation of Consumer Confidence Reports (Analysis and Recommendations for Improved Customer Communications)

Web-enabled SDWIS-State Reporting Guidance

Summary Reports on 13 Data Verifications

CORE AREA 3: PROMOTION OF SUSTAINABLE MANAGEMENT OF DRINKING WATER INFRASTRUCTURE

FY 05 Strategic Targets

None

FY 05 Major Activities

1. Drinking Water State Revolving Fund (DWSRF) Program

The DWSRF program will continue to provide several hundred more loans to public water systems for infrastructure improvement projects. (According to a May 2003 report, the DWSRF has made available \$6.4 billion to finance more than 3,000 infrastructure improvement projects since its initial operations in 1997).

Program Activity Measure for DWSRF

Fund utilization (cumulative dollar amount of loan agreements divided by cumulative funds available for projects) will reach 86% for the DWSRF.

2. Sustainable Infrastructure Leadership Initiative

The first year of operation of this initiative, which includes both drinking water and wastewater infrastructure, will be FY 05. EPA will work in partnership with States, the water utility industry, and other stakeholders to ensure sustainability of water and wastewater systems. The specific focus of this initiative is to identify and promote new and better ways of doing business in the water and wastewater industry. EPA will work with the water industry to identify best practices that have helped many of the Nation's utilities address their own internal gap and extend their use to a greater number of utilities.

3. Infrastructure Assistance to Puerto Rico

Because of inadequate infrastructure, < 30% of people served by the METRO water system receive drinking water meeting all health-based standards. To improve this public health problem, EPA will support the first phase of the design of necessary infrastructure improvements in FY 05. Improvements in infrastructure should help this system in reducing its violations of health-based standards.

4. Improving Indian Tribes' and Alaskan Native Villagers' Access to Safe Drinking Water

EPA will work with other federal agencies committed to improving a range of serious public health and environmental problems facing these groups.

Major Roles and Responsibilities for FY 05 Activities: Promotion of Sustainable Management of Drinking Water Infrastructure

Activity	EPA		States	CWSs	Other
	Headquarters	Regions			
DWSRF	Consider any needed guidance or directive to streamline and improve fund utilization at the state level Ensure capitalization funds are provided to states in a timely manner	Monitor fund utilization on a quarterly basis to ensure that states will achieve the target of 86% Conduct annual reviews of state program	Administration of DWSRF monies, provide loans to systems, manage set-asides Monitor utilization on a quarterly to achieve the target of 86% utilization	Apply for SRF funding Conduct infrastructure improvements using funds	Council of Infrastructure Financing Authorities (CIFA), ASDWA
Sustainable Infrastructure Leadership Initiative	Evaluate state efforts on capacity development Provide additional capacity development tools or outreach materials as needed Identify 2 or 3 interested utilities and facilitate stakeholder engagement on watershed and infrastructure issues Develop and share case studies of successful watershed initiatives Develop outreach and marketing campaign for water efficient products	Work with states to identify capacity development needs Work with states to identify potential watersheds for stakeholder engagement	Continue to implement the state's capacity development program and track status of systems Evaluate whether watershed activities could be enhanced through a stakeholder engagement process	Obtain necessary tools and materials to monitor and maintain the capacity of the water system. Consider how to engage stakeholders in their watershed to promote protection and infrastructure needs Promote water efficiency at CWS and the use of water efficient products in the community	ASDWA, Finance and TA Centers, local watershed or environmental organizations

Activity	EPA		States	CWSs	Other
	Headquarters	Regions			
Assistance to Puerto Rico	Support first phase of infrastructure design improvements	Region 2 provide assistance to EPA HQ and Puerto Rico	Work with Region, EPA Headquarters, and METRO on design phase	Work with primacy agency and EPA to design infrastructure improvements	METRO, Puerto Rico Primacy Agency
Assistance to Indian Tribes and Alaskan Native Villagers	Work with Federal agencies committed to improving health and environmental problems	Provide support to EPA Headquarters Direct implementation of SDWA with Indian tribes and Alaska Native Villages	Work with EPA to identify needs and develop solutions	Work with agencies to correct health and environmental problems	BIA, IHS, Alaska primacy agency, local health/nursing organizations

Related Guidance/Other Materials to be Issued in FY 05 (in collaboration with the wastewater program)

Rate-setting STEP Guide (for Systems)

Restructuring STEP Guide (for Systems)

Drinking Water Academy Course on Restructuring (for States and systems)

Benefits of Restructuring

Compendium of Model Restructuring Statutes and Regulations Manual for States (for States)

Asset Inventory STEP Guide for Manufactured Housing Communities and Homeowner's Associations (for very small systems, serving less than 100 persons)

Asset Management Tool Analysis

BMP Brochure - Incorporating Environmental Management Systems into the Capacity Development and DWSRF programs (for States and systems)

Continued Maintenance of the Sustainable Infrastructure Initiative Webpage

Analysis of Set-Asides under the DWSRF program

Small Systems Partnership Solutions for Public Health Protection

CORE AREA 4: PROTECTION OF SOURCES OF DRINKING WATER FROM CONTAMINATION

FY 05 Strategic Target

F. Percentage of source water areas for CWSs that achieve minimized risk to public health.

Definition: A CWS is counted in this measure if it is implementing Steps 1-6 of a source water protection program. Steps 1-4 are the steps of the Source Water Assessment Program each state defined in their Regional Administrator approved programs. Steps 5 and 6, management measures and contingency planning, respectively, were either defined by each state or in coordination with Regions. In FY 01 – FY 04, Regions, working with States, have made commitments and will use this measure for FY 05.

For FY 05, a commitment should be made for the “% of CWSs and related % of population implementing source water protection programs.” Headquarters will do a national conversion to ensure we can write national report language using the new Strategic Target F, which is based on source water areas. If a Region wants to do so, it could make a commitment using the “% of source water areas for CWSs and related % of population implementing source water protection programs.”

How to Report: Regions submit annual commitments (i.e., targeted percentage and justification) to be negotiated with Headquarters. End-of-Year data submitted by Regions to Headquarters.

FY 05 Major Activities

1. Voluntary Source Water Protection Strategies

Based on the states’ assessments of source water that is or could be threatened by contamination, states and/or communities will be implementing voluntary protection strategies for high-risk source waters.

2. Coordinate Water Protection Efforts (Within EPA and with other Federal Agencies)

EPA will be fostering coordination of water protection activities, especially in delineated watershed protection areas. In addition to activities and programs authorized by SDWA, states and/or communities can expand their prevention efforts through programs and activities supported under Clean Water Act (CWA) authorities. For example, within the watershed management context, EPA will work with the U.S. Department of Agriculture (USDA) and state-based water organizations to identify a minimum of five (5) drinking water systems whose water supplies are seriously threatened by agricultural contaminants like herbicides, pesticides, and nitrogen. Once identified, USDA’s field offices (e.g., Extension Service, Conservation Districts) will work with the farmers within

the watershed, especially those with land near drinking water intakes, to change their farming practices to those that are more environmentally friendly in general and specifically do not seriously impact water quality.

3. Protecting Underground Sources of Drinking Water (USDWs)

Controlling the injection of hazardous substances and other waste by implementing existing regulations for all deep wells (Classes I-III) and two categories of shallow wells (Class IV and V) only partially addresses the threat to USDWs. In 2005, EPA will continue to focus on the ubiquity of shallow wells (Class V) in source water areas for CWSs and strengthen support to states on their Class V efforts.

In addition, EPA will continue to work with the Department of Energy on the appropriate process of disposing carbon dioxide through a carbon sequestration underground process and determining the class of underground wells this injectate would fall within.

Program Activity Measures for USDW Protection

- a) Separately for each class of well, the percentage of Classes I, II, III, and V wells identified in violation that are addressed in the UIC Program.
- b) Percentage of identified Class V motor vehicle waste disposal wells that are closed or permitted.
- c) Percentage increase in the number of inspections conducted for Class II and Class V wells above a 2004 baseline.

Major Roles and Responsibilities for FY 05 Activities: Protection of Sources of Drinking Water

Activity	EPA		States	CWSs	Other
	Headquarters	Regions			
Voluntary Source Water Protection Strategies	Provide status on SWP measures; establish data reporting system. Promote SWP efforts	Promote SWP efforts in the states; coordinate with HQ Report to HQ on SWP measures	Complete SW assessments, if needed Support CWSs in implementing voluntary prevention strategies	Implement prevention strategies to address all potential sources of contamination.	GWPC, ASDWA participate on work groups, coordinate on measures effort. AWWA, NRWA assists CWS in developing prevention strategies
Coordination of CWA-SDWA Programs/Activities	Work with OST to establish baseline measure of the extent to which state WQS protect source water	Review new state WQS to ensure that they protect drinking water sources	Set state WQS that protect DW sources Develop TMDLs that protect drinking water sources. Provide input on baseline measure of the extent to which state WQS protect DW sources	Participate in public comment process for new or revised WQS and TMDLs	ASDWA, ASIWPCA to participate in measurement efforts
Protecting USDWs	Promote prevention efforts related to Class V wells Compile UIC measures	Implement UIC Program in DI states Support Class V efforts in states	Implement UIC primacy programs, including Class V Rule Complete Class V surveys; increase Class V inventory	Address injection wells (e.g., Class V septic systems, motor vehicle waste disposal wells) in local prevention strategies	GWPC, ASDWA participate on work groups, coordinate on measures effort.

Related Guidance/Other Materials to be Issued in FY 05

Rule and Guidance on Optional General Permits in the UIC Program re:Class V wells in Direct Implementation States

Guidance on Implementing the Agency's Strategic Plan - Source Water and UIC Strategic Targets and PAMs, including Definitions

CORE AREA 5: SAFEGUARDING CRITICAL WATER INFRASTRUCTURE

FY 05 Strategic Target

None. Efforts are underway to determine appropriate approaches to measuring best practices for water security.

FY 05 Major Activities

1. Best Security Practices

High priority activities include training and technical and limited financial assistance for the water sector's preparation of voluntary best practices for water utility security, including effective security enhancements, innovative financing mechanisms, and design standards to incorporate security measures in new construction, reconstruction, and retrofitting.

2. Emergency Response

Training, including exercises and simulations, on response protocols for water utilities and others they would depend on in an emergency, e.g., local law enforcement officials, Hazmat teams, environmental laboratories, other infrastructure, and public health officials will be conducted. Training will improve response for all emergencies, such as blackouts, accidental contamination, hurricanes, and earthquakes, not just those related to homeland security.

3. Information Dissemination

Information tools to provide up-to-date data on contaminant characteristics, water treatment effectiveness, detection technologies, analytical protocols, and laboratory capabilities for use by individuals or organizations responding to a water contamination event will be implemented. The secure Information Sharing and Analysis Center (WaterISAC) to exchange and analyze threat and incident information and to serve as a clearinghouse for sensitive information for all drinking water and wastewater utilities will continue to be supported.

4. Homeland Security Presidential Directive 9

This directive was issued in January 2004 and outlines many new responsibilities for EPA and the water sector for the protection of critical water infrastructure. The approach to implementing this directive has not yet been determined.

Roles and Responsibilities for FY 05 Major Activities: Safeguarding Critical Water Infrastructure

Activity	EPA		States	CWSs	Other
	Headquarters	Regions			
Best Security Practices	Develop a voluntary best practices guidance for water sector security Work with water industry to incorporate security standards into design standards	Participate in workgroups	Participate in workgroups Review and update design requirements to ensure they reflect new security standards	Participate in workgroups Ensure the incorporation of security elements in the design or retrofitting of water infrastructure	AWWA, ASCE, Ten States Standards, ASDWA, engineering firms
Emergency Response	Develop/implement protocols for emergencies for water sector and first responders	Implement protocols with Regional RICT teams for emergencies for water sector and first responders.	Coordinate with utilities that conduct exercises	Conduct regular exercises to test emergency response plans	Utilities, first responders – law enforcement and health care providers
Information Dissemination	Promote and expand participation in WaterISAC Work with states, NRWA, and others to determine how best to reach non-ISAC members Develop simple summaries and information fact sheets related to security tools and information that can be used by a range of systems sizes and types	Implement Regional communication network within the water sector.			ASDWA, NRWA
Homeland Security Presidential Dir. 9	TBD	TBD	TBD	TBD	TBD

Related Guidance/Other Materials to be Issued in FY 05

Guidance on Best Security Practices

Guidance on Water Security Program Grants to the States

RELATED TOPICS SUGGESTED IN OCTOBER 2003 GUIDANCE ON FY 05 NATIONAL IMPLEMENTATION PLANS BY SUBOBJECTIVE

1. Coordination with Regional Plans

Regional activities are an integral part of this subobjective implementation plan. All Regions' strategic plans, which were developed in relation to the Agency's 2003 national strategy, include descriptions of their many endeavors that directly contribute to and demonstrate progress toward the FY 08 subobjective goal to ensure that 95% of the population served by CWSs receives drinking water that meets applicable health-based standards. In addition, some Regions included Region-specific initiatives or situations, which are incorporated into the appropriate major activities within the five core areas in this subobjective implementation plan.

In mid-February 2004, the Regions will provide preliminary commitments to the Strategic Targets and Program Activity Measures presented in the preceding section of this document.

In early FY 05, the regions will begin communications with the states and tribal programs to establish the FY 06 external budget measures and resource needs as part of the Agency budget process.

2. Partners

OGWDW is committed to collaborating on strategic action-oriented partnerships with other federal agencies, states, tribes, and local governments to ensure the protection of public health and the environment. OGWDW acknowledges that maintaining strong partnerships with states, tribes and local governments is critical to the national effort to protect human health and the environment. OGWDW is taking a fresh look at revitalizing and capitalizing on existing partnerships to more effectively use the full array of our resources and tools and those of our partners and stakeholders to collectively solve drinking water problems. EPA intends to actively engage stakeholders in broad-based dynamic partnerships to affect infrastructure solutions at the local level.

Through 2008, states will play a strong role in implementing drinking water programs. Because problems may vary from state to state, region to region and at the local level, EPA is promoting flexibility. For the most part, the authority to implement drinking water programs is delegated to the states and territories. EPA works with tribal programs for tribal country. State administration of drinking water programs with EPA oversight will ensure compliance and achievement of national drinking water goals. For example, new rules acknowledge the unique regional, local and 'neighborhood' situations in their implementation. Flexibility in newer rules allows local decision makers to more effectively utilize available resources and make decisions based upon the conditions unique to a community.

Federal Partners

The drinking water program collaborates with many federal partners on matters pertaining to data availability, outreach, and technical assistance. For instance, EPA and USGS are engaged in joint, collaborative efforts to improve the quality of information supporting risk management decisions-making, generate new data, and eliminate potential overlap.

Through 2008, OGWDW will continue to work with DHHS, particularly CDC, to provide safe drinking water to the public. In accordance with both an MOU and an IAG, EPA and CDC will carry out provisions under the 1996 SDWA amendments, which mandate that the two agencies conduct a study of waterborne diseases and occurrence studies. EPA and CDC are working together to train health care providers on public health issues related to drinking water contamination.

To assure protection of sources of drinking water, EPA is working with a number of agencies, e.g, USDA, DOT to coordinate activities within a delineated source water area. For those agencies that own and operate public water systems (DOD, DOI), the drinking water program works with them and the states to make sure these systems are included in states' source water assessments. Source water monitoring will enable states and communities to focus on the greatest risks and advocate a local approach to ensuring that drinking water sources are not contaminated.

Through 2008, OGWDW will continue to work with the Bureau of Indian Affairs, the Indian Health Service, and the tribes to promote providing drinking water from the numerous drinking water systems in Indian Country that meet the health based standards.

Internal Partners

The Office of Enforcement and Compliance Assistance (OECA) sets companion priorities for CWA and SDWA programs. Under CWA authorities, OECA intends to target combined sewer overflows, sanitary sewer overflows, and concentrated animal feeding operations. Discharges from these sources contain raw sewage and have high concentrations of bacteria from fecal contamination, as well as disease causing pathogens and viruses. Releases of this nature pose a potential threat to ground and surface water used for drinking water. Targeted enforcement and compliance assistance in these areas would reduce contamination of drinking water sources.

Under the authority of SDWA, OECA's highest priority for FY 05 is ensuring compliance with microbial drinking water regulations through enforcement and compliance assistance. OECA intends to focus discussions with the Regions on those systems with un-addressed, significant non-compliance for microbial rules. The Regions (and states) are expected to address through enforcement, targeted compliance monitoring or compliance assistance, all public water systems, including federal facility and tribally-owned or operated systems, which can become significant non-compliers. Particular emphasis is placed on enforcement and compliance assistance activities where source water for drinking water or wellhead protection areas is contaminated or threatened.

The Surface Water Treatment Rule (SWTR) requires drinking water systems to install filters according to an enforceable schedule. Since the majority of systems have installed filters the focus will shift to: monitoring progress and taking enforcement action where schedules are not met; reviewing compliance status and taking enforcement actions as necessary; reviewing ground water systems determined to be influenced by surface water; and, reviewing compliance status of systems not required to filter to ensure compliance with applicable avoidance criteria. OECA advises Regions to continue focus on compliance assistance and enforcement under Stage 1 DBP Rule and the Interim Enhanced SWTR, with a particular emphasis on small systems. Enforcement activities will be primarily targeted to large systems and address substantial and imminent endangerment.

3. Innovations, Opportunities and Challenges

Preceding sections of this plan have briefly referenced the major innovations developed by the drinking water community to meet the goal of protecting public health through safe drinking water. These innovations offer unique opportunities to progress steadily toward the attainment of the ambitious goal that by 2008, 95% of the population served by CWSs will receive drinking water that meets all applicable health-based drinking water standards through effective treatment and source water protection. Selected innovations and opportunities include:

Area-Wide Treatment Optimization Programs, a voluntary approach that assists states and Regions to more effectively use their resources to implement the Microbial/Disinfection Byproducts (M/DBP) regulations and improve treatment plant performance beyond the regulatory requirements. AWOPs facilitate specific performance improvement and treatment optimization activities with surface water systems using Regional and states' personnel. Treatment optimization refers to the process of maximizing water treatment system performance to protect against pathogenic microorganisms by utilizing existing plant capacity/capability when feasible. The AWOP process determines the *status* of each state's surface water treatment utilities relative to optimization goals; prioritizes necessary technical assistance/response from the state/region based on such determination; and creates a process for long-term follow-up to institutionalize improvements in water treatment plant performance. This targeted technical assistance promotes more efficient/effective application of limited state resources to those facilities most in need, particularly to those utilities struggling to achieve or maintain compliance.

Small System Performance Improvement Tools that will help small systems treating surface water sources to dramatically improve: a) protection against the introduction of certain contaminants into source waters; and b) performance of their treatment facilities by optimization of filtration and disinfection barriers. Significant improvements in microbial protection have already been demonstrated at surface water treatment plants using the optimization concepts upon which the subject tools are being built. Yet many small systems have special challenges (technical, managerial, and/or financial) in achieving such improvements. Facilitated assistance is not always available to overcome these challenges. Accordingly, the subject tools are being developed to be used by small systems in a non-facilitated (i.e., "self-help") manner, or in conjunction with support from technical assistance providers, to apply key optimization concepts to assess the adequacy of their filtration processes; identify system vulnerabilities; and, develop/implement improvement strategies.

Addressing Resource Shortfalls Major innovative tactics are needed to address resource gaps because insufficient resources are a significant obstacle to achieving our short and longer-term goals. States and Tribes are facing shrinking general budgets and resource gaps in all areas, so it was not a surprise that every Regional plan identified the lack of available state funds as the major challenge in the effective implementation of the drinking water program. New approaches for funding are critical in achieving the subobjective goal. Continued support of the drinking water state revolving fund and federal grants are essential in supporting the state and tribal programs. In addition, the Agency is promoting a Sustainable Infrastructure Initiative to help address resource gaps at the system level. The Agency is promoting and providing information on management practices such as asset management and environmental management systems that can help systems maintain technical, financial and managerial capacity and operate more efficiently.

4. Evaluation of Progress

Headquarters and Regions will be involved in customary mid-year and end-of-year performance reporting exercises. The performance reports will assess any new information with respect to strategic targets and program activity measures. The report will identify reasons for progress or lack of progress, including identification by state or region those best practices facilitating strong performance. Findings from Regional dialogues should also be considered in these reports.

A key indicators tool (KIT) to assist EPA and the states in evaluating progress toward meeting the drinking water program's goal is under development at this time. The following is an explanation of this evaluation tool:

KIT is:

- A program management tool that states and EPA can use to identify areas where more needs to be done to achieve SDWA's comprehensive "source-to-tap" approach to public health protection.
- A succinct number of measures that represent the full breadth of the national drinking water program and reflect the condition and status of state programs.
- A measurement tool that closely parallel key drinking water program measures under EPA's new Strategic Plan and GPRA architecture.
- A mechanism that enables cross-region and cross-state comparisons as well as comparisons against national goals and averages. These are useful for understanding how individual states and Regions fit into the national picture; targeting and motivating efforts to improve public health protection and meet national goals in critical program areas; and identifying and

sharing what's working and what's not.

- A format that recognizes that numbers and percentages may not reflect the full picture, so charts and graphs are accompanied by short narratives that highlight key issues and caveats to provide a better understanding of and a balanced context for the data. Measures are based on consistent data that states are already making available or plan to make available.

KIT is *Not*:

- A complete picture of all aspects of the drinking water program. There are additional measures and information that support and augment the KIT measures to provide a more complete picture.
- A “pass-fail” system for states. Rather, it is a management tool that points to areas where states need to focus more attention to ensure that public health is protected.